

REMARKS

Claims 1-12, 23, 24, and 33-78, are all the claims pending in the application. Previously, claims 13-22 and 25-32 were canceled without prejudice or disclaimer. New claims 50-78 have been added to further define the invention. Reconsideration and allowance of all the claims are respectfully requested in view of the following remarks.

Personal Interview

Applicants thank Examiner Flores-Sánchez for the courtesy extended to their attorney Mr. Jeffrey Schmidt during the personal interview conducted on March 10, 2005. The Examiner's Interview Summary record includes that discussed at the March 10 interview. No further summary is believed to be necessary.

Election/Restriction

The Examiner has withdrawn claims 33, 36, and 44, from further consideration as being directed to a non-elected invention. Specifically, the Examiner notes that these claims are directed to a sliding shaft support portion that was the subject of non-elected Species XI, Figs. 43-46. No reply is believed to be necessary at this time. Applicants respectfully request that these claims be rejoined upon allowance of the respective independent claims from which they depend.

New claims 50-78 have been added to further define the invention. Independent claims 53, 61, and 70, are similar to claims 1, 34, and 42, respectively. Further, dependent claims 50-52, 54-59, 62-68, and 71-77, are readable on the elected species and, therefore, should be examined with the elected species. New claims 60, 69, and 78, are similar to withdrawn claims 33, 36, and 44, but Applicants respectfully request rejoinder of these claims upon allowance of the base claims from which they depend.

Drawings

The Examiner objected to the drawings under 37 C.F.R. § 1.83(a). Specifically, the Examiner asserted that the drawings must show the laser light that travels in a direction

“intersecting the rotation axis of the blade”, as set forth in claims 35 and 43. To overcome this objection, Applicants have amended claims 35 and 43 to set forth that the direction of the laser light “crosses with a longitudinal direction of” the rotation axis of the blade. The term “crosses” together with the use of the term “direction” defines the relationship wherein the laser light itself does not necessarily come into contact with the rotation axis of the blade. This arrangement is shown in Fig. 8, for example.

Claim Rejections - 35 U.S.C. § 112

The Examiner rejected claims 42, 43, and 45-49, under § 112, 2nd paragraph, as indefinite. Specifically, the Examiner asserted that “a moving locus” is not clear. Applicants have amended claim 42 in a manner believed to clarify this phrase.

Claim Rejections - 35 U.S.C. § 102

- The Examiner rejected claims 1, 34, and 42, under §102(b) as being anticipated by US Patent 4,805,500 to Saito et al. (hereinafter Saito). Applicants respectfully traverse this rejection because Saito fails to disclose all of the elements as set forth and arranged in the claims.

Each one of independent claims 1, 34, and 42, includes features of a miter saw. Saito does not disclose any one of “a circular saw blade,” or “a cutter blade portion pivotally movable between an upper position and a lower position.” Instead, Saito discloses a band saw blade on a cutting head that does not pivot; the cutting head moves up and down in the same horizontal orientation due to the action of guide post 39 and sub guide post 41. See, for example, col. 6, lines 39-64.

Additionally, Saito fails to set forth the relationship between the laser light and the blade as set forth in the claims.

Claim 1 sets forth that the laser generator is attached to one of the holder and the cutter blade portion in an orientation to direct at least a portion of the laser light onto a position to be cut on the workpiece so that laser light is directly beneath the rotatable circular saw blade.

Claim 34 sets forth that the laser generator is attached to one of the holder and the cutter blade portion to direct at least a portion of the laser light onto a position to be cut on the workpiece while satisfying the following conditions:

(1) the laser light travels within a space defined between the two planes bounding the blade width; and

(2) the laser light travels between the blade edge and the base when the cutter blade portion is in the upper position.

Claim 42 sets forth that the laser generator is attached to one of the holder and the cutter blade portion to direct at least a portion of the laser light onto a position to be cut on the workpiece, the laser generator being configured and arranged so that an entire width of the laser light on the workpiece is locatable within a space defined by a locus of the width of the blade edge as the cutter blade portion moves from the upper position to the lower position.

In the above arrangements, the laser alignment mark will appear on a workpiece at a position which will be cut by the blade when the cutter blade portion is moved from its upper position to its lower position. In such an arrangement, the circular saw blade can drop onto the position of the laser light. Accordingly, when the laser light is aligned with a mark as drawn by a user, the blade easily can be made to remove the user's mark, thereby enhancing the appearance of goods made by pieces cut with the cutter. Additionally, without misunderstanding, the cutting position of the saw can be known before cutting.

In contrast to that set forth in each of claims 1, 34, and 42, Saito does not show a specific relationship between the laser beam LB and the cutting tool 5. Instead, in column 14, Saito discloses that the laser beam head 205 "agrees with the vertical surface on which the cutting tool 5 moves .." See lines 10-29. In such an arrangement, it is likely that the laser beam is aligned with the vertical side surface of the cutting tool 5. That is, the "vertical surface on which the cutting tool moves" is the surface to either side of the cutting tool, whereby the laser beam is not at a position that will be cut by the cutting tool. Accordingly, the user must remember to which side of the saw blade the laser light falls, which results in possible confusion of the user and reduced accuracy of the cut position.

For at least any of the above reasons, Saito fails to anticipate independent claims 1, 34, and 42.

- The Examiner rejected claims 42, 43, 45, and 47-49, under §102(b) as being anticipated by US Patent 5,285,708 to Bosten et al. (hereinafter Bosten). Applicants respectfully traverse this rejection because Bosten fails to disclose all of the elements as set forth and arranged in the claims.

In Bosten, laser light passes along the side face of the saw blade. The entire width of the laser light does not pass within a space defined by a locus of the width of the saw blade as the cutter blade portion moves from the upper position to the lower position. On the other hand, in the presently claimed invention set forth in claim 42, the laser light is directed onto a position to be cut on the workpiece, and the laser generator is configured and arranged so that an entire width of the laser light on the workpiece is locatable in the space defined by a locus of the width of the saw blade as the cutter blade portion moves from the upper position to the lower position.

In Bosten, the laser light cannot be directed at any position in a width direction of the laser light to be cut on the workpiece because the laser light is shown down on top of the blade 36 so that the blade 36 blocks a portion of the laser light, whereby at least part of the laser light width (i.e., that not blocked by the blade 36) will be outside of the width of the blade edge.

On the other hand, in the present invention, the laser light is directable on the position to be cut on the workpiece in order that an entire width of the laser light may be positioned within the cutting position.

For at least any of the above reasons, Bosten fails to anticipate independent claim 42. Likewise, this reference fails to anticipate dependent claims 43, 45, and 47-49.

Claim Rejections - 35 U.S.C. § 103

- The Examiner rejected claims 3 [read 2], 12, 37, 41, 45, and 49, under §103(a) as being unpatentable over Saito in view of US Patent 2,806,492 to Becker (hereinafter Becker). Applicants respectfully traverse this rejection for the following reasons.

As noted above, Saito is deficient. The Examiner cites Becker as teaching a laser generator having means for moving the light emitting portion. Assuming, for the sake of

argument alone, that the Examiner's interpretation of Becker was correct, such a teaching still does not make up for the above-noted deficiencies in Saito. According, even if one of ordinary skill in the art were motivated to combine Saito and Becker as suggested by the Examiner, any such combination would still not render obvious Applicants claims 2, 12, 37, 41, 45, and 49.

With respect to claims 12, 41, and 49, Applicants respectfully traverse this rejection because for the following additional reasons the references fail to teach or suggest all the elements as set forth in the claims.

Each one of claims 12, 41, and 49, sets forth a laser generator comprising a light emitting portion; a laser generator support member; means for moving the light emitting portion in the horizontal direction; the laser generator support member comprising a first side wall extending in a vertical direction, and a first stop member provided to the first side wall and movable in a horizontal direction. Thus, as set forth in claims 12, 41, and 49, both the light emitting portion and the first stop member are movable in the horizontal direction.

With respect to the above-noted features, the Examiner misinterprets the references. The Examiner acknowledges that Saito fails to teach or suggest a laser generator support member as claimed. Thus, the Examiner relies on Becker as teaching this feature. Specifically, the Examiner asserts that Becker teaches a laser generator support member 13 having first and second stop members which are the inside walls of the support member.¹ However, Becker describes 8 as the light projector assembly housing, and further describes that element as being "fixedly mounted on the support 12, and is substantially integral therewith."² Becker describes that it is element 13 which is an adjusting mechanism consisting of a threaded pin 18 fixedly attached to a light projector and a thumb screw 17.³ The adjusting mechanism 13, together with the light projector, moves horizontally relative to the housing 8, but the interior walls of the

¹ Office Action at page 5, lines 2-4.

² Becker at col. 2, lines 68-69.

³ Becker at col. 3, lines 15-28.

housing do not move in the horizontal direction. Accordingly, Becker fails to teach or suggest that both the light projector and a first stop member are movable in the horizontal direction, as set forth in claims 12, 41, and 49.

Therefore, even assuming that one of ordinary skill in the art were motivated to combine Saito and Becker as suggested by the Examiner, any such combination would still not teach or suggest that both a light projector and a first stop member are movable in a horizontal direction.

Allowable Subject Matter

Applicants thank the Examiner for indicating that claims 23 and 24 are allowed, that claims 3, 10, 11, 35, 38, 39 and 40 would be allowed if rewritten in independent form, and that claim 46 would be allowable if rewritten in independent form as well as to overcome the Examiner's rejection under §112.

Applicants have not rewritten 3, 10, 11, 35, 38, 39, 40, and 46 in independent form at this time because of the belief that the base claims are allowable as written.

New Claims

A cutter as set forth in all claims 53, 61, and 70, is characterized in that a laser generator is attached to a holder, whereas claims 1, 34, and 42 provide a cutter having a laser generator attached to one of a holder and a cutter blade portion.

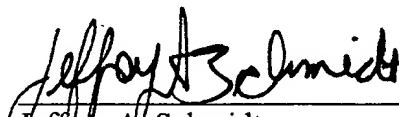
In claims 53, 61, and 70, by providing the laser generator at the holder, the distance between the laser generator and the workpiece is constant when the cutter blade is pivotally moved from the upper position to the lower position. Thus, for reasons similar to those set forth above, the invention in each of claims 53, 60, and 68 is patentable over the cited references.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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23373

CUSTOMER NUMBER

Date: March 23, 2005